

RECEIVED
CENTRAL FAX CENTER
APR 10 2006

Docket No.: 4619-009

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of

Francis VANDERBIST

U.S. Patent Application No. 09/424,247

: Group Art Unit: 1618

: Allowed:

Filed: November 30, 1999

: Examiner: BERKO, RETFORD O

For: DRY POWDER INHALER EXCIPIENT, PROCESS FOR ITS PREPARATION AND
PHARMACEUTICAL COMPOSITION CONTAINING IT

DECLARATION TRANSMITTAL LETTER

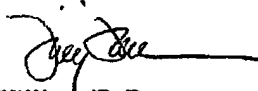
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Enclosed is an executed *Rule 132 Declaration* in connection with the above-referenced application. We request that the record be clarified to acknowledge that the Declaration has been received and made of record.

Respectfully submitted,


LOWE HAUPTMAN & BERNER, LLP


William E. Beaumont
Registration No. 30,996

1700 Diagonal Road
Alexandria, Virginia 22314
(703) 648-1111 WEB/kw
(703) 518-5499 Facsimile
Date: April 10, 2006

CERTIFICATION OF FACSIMILE TRANSMISSION
I HEREBY CERTIFY THAT THIS PAPER IS BEING FACSIMI-
LE TRANSMITTED TO THE PATENT AND TRADEMARK OFFICE
ON THE DATE SHOWN BELOW
KARYL WEST

TYPE OR PRINT NAME OF PERSON SIGNING CERTIFICATION

 4-10-06
SIGNATURE DATE
571-273-8300

FACSIMILE NUMBER

BEST AVAILABLE COPY

04/06 2006 13:09 IFAX sharescan@IPFirm.com

- Bill Beaumont

002/005

04/06/2006 11:25 2583415

GALEPHAR PR INC

PAGE 02

DE :SMB

N° FAX :024120991

05 APR. 2006 14:42

P2

RECEIVED
CENTRAL FAX CENTER

APR 10 2006

PATENT

Docket No.: 4619-009

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of

Francis VANDERBIST et al.

U.S. Patent Application No. 09/424,247

Group Art Unit: 1618

Filed: November 30, 1999

Examiner: Retford O. Berko

For: DRY POWDER INHALER EXCIPIENT, PROCESS FOR ITS PREPARATION AND
PHARMACEUTICAL COMPOSITION CONTAINING ITCommissioner For Patents
P.O. Box 1450
Alexandria, VA 22313-1450DECLARATION UNDER 37 CFR 1.132

Sir:

Now comes Francis Vanderbist, who states as follows:

- 1) I am one of the co-inventors of the present invention;
- 2) I have both training and many years of experience in the field of pharmaceutical chemistry;
- 3) I have conducted and/or supervised the following experiment and have demonstrated the unexpectedly superior pulmonary fraction of active ingredient made available from a dry powder inhaler (DPI) formulation when using anhydrous roller-dried β -lactose as an excipient as compared to spray-dried α -lactose monohydrate in a particle size range of from 150 to 250 μ m.

Table 2 at page 12 of the present application describes the influence of the nature of lactose used as an excipient, i.e., anhydrous roller-dried β -lactose versus spray-dried α -lactose

BEST AVAILABLE COPY

04/06 2006 13:09 IFAX sharescan@IPFirm.com

Bill Beaumont

0003/005

04/06/2006 11:25 2583415

GALEPHAR PR INC

PAGE 03

DE :SMB

NP FAX :024120991

05 APR, 2006 14:42

P3

monohydrate, and the particle size of these lactoses on the in-vitro deposition of L-lysine N-acetyl cysteinato (NAL).

The lactose particle size studied as described and evaluated in the present specification was between about 63 μ m and 150 μ m. A further experiment was conducted as described below using a lactose particle size between about 160 μ m and 250 μ m using NAL and another active substance.

EXPERIMENT

An experiment was performed using roller-dried anhydrous β -lactose and spray-dried α -lactose monohydrate with particle sizes comprised between 150 μ m and 250 μ m.

The two active drugs selected were NAL (ratio NAL/Lactose: 1/4) and Budesonide (ratio Budesonide/Lactose: 1/100).

Comparative in-vitro lung deposition of NAL and Budesonide using two different lactoses (roller-dried anhydrous β -lactose versus spray-dried α -lactose monohydrate) with the same particle size comprised between 150 μ m and 250 μ m.

The pulmonary fraction was measured using the multistage liquid Impinger at 100 l/min. during a period of 2.4 seconds, otherwise using the same procedure as described in the present specification. The results are shown below.

04/06 2006 13:09 IFAX sharescan@IPFirm.com

- Bill Beaumont

004/005

04/06/2006 11:25 2583415

GALEPHAR PR INC

PAGE 04

DE :5MB

NP FAX :024120991

05 APR. 2006 14:43

F4

Active Drug	Ratio Active/Lactose w/w	FPD in percent (%)		
		Anhydrous roller dried β lactose 150-250 μ m	Spray dried α lactose monohydrate 150-250 μ m	Difference in Percent [%]
NAL	1/4	28	25	12
Budesonide	1/100	31	24	29

The in-vitro fine particle dose (FPD) obtained with the formulation containing the roller-dried anhydrous β -lactose with a particle size comprised between 150 and 250 μ m is significantly greater (12% and 29% for NAL and Budesonide) than the one obtained with formulations containing the same active ingredient and spray-dried α -lactose monohydrate of the same particle size (150 μ - 250 μ m).

This demonstrates the clear and unexpected superiority of the roller-dried β -lactose with a particle size comprised between 150 and 250 μ m to deliver active drugs from DPI formulations with an improved pulmonary fraction.

4) I am of the opinion that the above results would not have been expected by one skilled in the art at the time the present invention was made. This conclusion is further evidenced by the fact that such results would clearly not have been expected by one skilled in the art at the time the present invention was made in view of the prior art of record in this application.

5) Further, I am of the opinion that the above results are important and commercially significant.

6) I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these

04/06 2006 13:09 IFAX sharescan@PFirm.com

- Bill Beaumont

2005/005

04/06/2006 11:25 2583415

GALEPHAR PR INC

PAGE 05

DE :SMB

N° FAX :024120991

05 APR 2006 14:43

P5

statements were made with the knowledge that willful false statements and the like so made are punishable by fine, or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Signature

F. LANDERS, ST

Date

27 March, 2006

BEST AVAILABLE COPY